noise is stronger than the signal. This condition is compatible with the requirements of high reliability of signal reception and accuracy of measurement in two cases: 1) If the noise spectrum is much broader than the signal spectrum and the filter is matched after the limiter; 2) in the reception of coded signals, whose duration multiplied by the spectral width yields a large quantity (as, for example, radiosignals with frequency or phase modulation). Wideband limiters, while not reducing the sensitivity, accuracy and resolution, are useful in preventing impulse noises, in automatically sustaining the random-noise level at the output, and in reducing the requirements with respect to the dynamic range of the channel. There are 2 figures. The most important English-language reference reads as follows: R. Manasse, R. Price, R. Lerner, Loss of signal detectability in band-pass limiters, IRE Trans., 1958, IT-4, 1, 34.

SUBMITTED: January 11, 1962

L 14992-63 EWT(1)/BDS/EEC-2/EED-2/EEO-2 AFFTC/ASD/ESD-3 P1-4/Pn-4

ACCESSION NR: AP3004366 S/0109/63/008/008/1326/1333

AUTHOR: Chernyak, Yu. B. 68

TITLE: Phase quantization during detection of signals against a noise background

SOURCE: Radiotekhnika i elektronika, v. 8, no. 8, 1963, 1326-1333

TOPIC TAGS: phase-signal detection, signal detection, noise background, phase quantization, quantized signal, equidistant quantization increment, fluctuation noise, phase quantizer

ABSTRACT: An optimal receiver for detecting signals within a noise background by means of quantizing the phase into an arbitrary number of equidistant increments and the dependence of receiver sensitivity on the increments are discussed. The investigated circuit is shown in Fig. 1 of the Enclosure. Input voltage V(t), containing both signal and noise, is time discriminated and phase quantized. Quantized signal Z(t) passes through the matched filter to an amplitude detector and then to a threshold device and a meter for signal detection and measurement. After quantization of the combined signal, the problem reduces to statistical detection of any signal present; this is accomplished by the matched filter, which

Card 1/2

L 14992-63
ACCESSION NR: AP3004366

is linear and has the required pulse characteristic such that its output will show any signal above some threshold value. A series of calculations demonstrates that quantization of the phase does not reduce the possibility of optimum detection; however, it does involve losses which vary inversely with the number of quantizing increments. At four increments the losses amount to 4 db, decreasing to 1 db with an increase in increments to 10 or more. The minimum number of quantization levels is three for detecting signals with a random initial phase. In order to ensure the linearity of the system, phase quantization must be realized at a point in the receiver where the noise level exceeds the desired signal by at least 3 db. This condition yields reliable receiver performance when the product of noise spectrum width and signal duration at quantizer input is considerably above 1. The properties of the described phase quantizer and filter combination are identical with those of an ideal limiter and filter combination. Orig. art. has: 1 figure and 20 formulas.

ASSOCIATION: none

SUBMITTED: 20Feb63 DATE ACQ: 20Aug63 ENCL: 01

SUB CODE: SD NO REF SOV: 005 OTHER: 004

Card 2/2

L 51289-65 EWT(1)/EWA(h) Peb

ACCESSION NR: AP5009078 UR/0108/65/020/003/0070/0077

AUTHOR: Chernyak, Yu. B. (Active member)

TITLE: Correlators with perfect limiters

SOURCE: Radiotekhnika, v. 20, no. 3, 1965, 70-77

TOPIC TAGS: correlator, correlation receiver

ABSTRACT: The use of perfect limiters and digital devices in correlators intended for detecting weak random signals is considered. The characteristics of classical correlators are compared with those of perfect-limiter-type correlators where information is carried only by phase [illegible] found that the perfect limiter stabilizes the noise level at the correlator [illegible] reduces the requirements on the dynamic range of the receiving channel and permits the use of high-speed processing by quantization of the signal phase. Despite a 4-db loss in signal-to-noise the digital correlators can be justified by the advantages which accrue from replacing the delay lines by digital storages and from binary-signal transmission without widening the link bandwidth. Orig. art. has: 3 figures and 40 formulas.

Card 1/2

L 51289-65
ACCESSION NR: AP5009078

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 27Jun63 ENCL: 00 SUB CODE: AA, EC

NO REF SOV: 004 OTHER: 002

Card 2/2

TOPOROV, N.A.; CHERNYAK, Yu.I.

Conference on the mechanization of viticulture. Trakt. i sel'khozmash. 31 no.1:46 Ja '61. (MIRA 14:1)
(Viticulture) (Agricultural machinery)

ODNOSUM, K.I., nauchnyy sotrudnik; KUDLAY, F.A., nauchnyy sotrudnik; CHERNYAK, YU.I., nauchnyy sotrudnik

Mechanization is an important factor in farm management. Mekh. sil'. hosp. 11 no.6:3-4 Je '60. (MIRA 13:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Farm mechanization)

CHERNYAK, Yu. I.

4) A F Aleksandrov, A L Lur'ye, [illegible], and Yu [illegible] - First Experiences in the Application of Electronic Computers for a Solution of the Haulage Rationalization Problem.

5) A Kaplan - Prospects for the Use of Linear Programming in the Over-all Planning of Rolling Stock Utilization

6) Ya Gleyzik - A Program for the Solution of Transport Problems on an Electronic Computer Involving Methods of Approximation By Means of Hypothetically Optimal Plans

7) A F Tret'yakova - An Optimal Freight Haulage Plan for the USSR Coal Industry

f. Morning Session - 17 December 1959, 1000 hours
V. The Checkerboard-Type Balance

1) V S Nemchinov - Theoretical Problems of the Checkerboard-Type Balance

2) L Ya Berri - The Checkerboard-Type Balance and the Planning of National Economy

3) Yu I Chernyak - Experience in Drawing Up an Input-Output Balance for an Economic-Administrative Region

4) V S Dadayan - Some Planning Calculations Based on the Input-Output Balance of an Economic Region

5) V V Kosov - A Regional Model of Agricultural Production

6) V I Zhivin, A I Klinskiy - The Nature and Special Features of Total Inputs

g. Evening Session - 17 December 1959, 1600 hours
VI. Mathematical Statistics

1) Ya M Bonderskiy - Statistical Methods for Determining the Average Prices of Goods

2) V V Shvyrkov - The Consumption Elasticity Indicator and Its Practical Importance in Studying the Workers' Level of Living

3) F Shelenyak - Analytical Methods of Studying the Dependence of Consumption on Income

4) L E Mints, B V Finkel'shteyn - Statistics and the Use of Mathematical Methods in Economic Research

5) V V Ponomarev - Research on Technical and Economic Laws in Non-ferrous Metallurgy with the Aid of Correlation Theory

6) N S Roytman - Application of Correlation Methods in the Analysis of Tractor Operating Costs

Report submitted at the Soviet Conference on Problems in the Application of Mathematical Methods in Economic Research, Leningrad, 18-21 January 1960.

S/158/60/000/003/001/001
D033/D112

AUTHOR: Dadayan, V. and Chernyak, Yu.

TITLE: Mathematical methods in economics

PERIODICAL: Nauchnyye doklady vysshey shkoly, Ekonomicheskiye nauki, no. 3, 1960, 140-151

TEXT: The first Soviet conference on the use of mathematical methods in economic research and planning was convened in the AS USSR from April 4 to 8, 1960. The conference was organized on the initiative of the Otdeleniye ekonomiki, filosofii i prava (Department of Economics, Philosophy and Law) AS USSR and the Sibirskoye otdeleniye (Siberian Branch) AS USSR. The 6 sections of the conference dealt with the following subjects: 1) mathematical analysis of the basic, most general laws of production; 2) inter-branch balances; 3) linear programming; 4) mathematical methods applied to transportation problems; 5) mathematical methods applied to technical-economic problems; 6) mathematical statistics. Number of participants was about 500, number of lectures delivered 56. B. Plyukhin and R. Nazarova reported on how they applied the mathematical method used in the study of chain interconnections (employed in the analysis of physico-chemical processes) to the

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Mathematical methods in economics

analysis of the rate of development and the proportions of expanded production. A. Boyarskiy, from the MGU, used differential equations to analyze the comparative rate of growth of 2 sub-branches of industry and the dependence of the rate of growth on the structural correlations in the economy. The lecture of P. Mstislavskiy, from the Institut ekonomiki (Institute of Economics) AS USSR, dealt with the use of mathematics in treating the problems of planning in national economy. A. Konyus lectured on mathematical analysis of the organic structure of the cost of production. V. S. Nemchinov, Member of the AS USSR, Director of the Laboratoriya ekonomiko-matematicheskikh metodov AN SSSR (Laboratory of Economic and Mathematical Methods at the AS USSR), gave a theoretical analysis of the methods of developing and applying the inter-branch balance in industry. Yu. Chernyak, V. Dadayan and V. Kossov lectured on the calculation of the coefficient of over-all expenses, on the experience they gained in applying this coefficient to the analysis of the ratios between individual branches of the national economy, and to the results obtained in applying that coefficient in planning production and material-technical supply in a given region. V. Kossov also demonstrated with an actual example how the data of an inter-branch balance can be used for achieving the best combination in fodder production. L. V. Kantorovich,

Mathematical methods in economics

S/158/60/000/003/001/001
D033/D112

Corresponding Member of the AS USSR, and V. Novozhilov outlined general methods for achieving optimum planning. L. Gor'kov discussed a single-product model describing the interdependence between such important production factors as growth of basic funds, change in the production output and rise of labor productivity. B. Mikhalevskiy, from the Laboratory of Economic and Mathematical Methods at the AS USSR, considered in his lecture a multi-product model of the national economy, and analyzed the interdependence between investment resources, the volume of investments, the growth of production capacities, and the volume of production for the case when reserves of production capacities and labor are scarce. I. Romanovskiy, from the Leningradskoye otdeleniye matematicheskogo instituta im. Steklova (Leningrad Branch of the Institute of Mathematics im. Steklov), and V. Trigubenko, from the Institute of Economics AS USSR, read papers dealing with the fundamentals of methods of dynamic programming. Ye. Chetyrkin read a paper on the optimum distribution of work pieces between machine tools having different capacities when the least time taken to complete the task is taken as an optimizing criterion. A. Kaplan lectured on the problem of how to set up the optimum plan for complex utilization of RR rolling stock. The workers of the Institut kompleksnykh transportnykh problem (Institute of Complex Transportation Problems) and the Vychislitel'nyy tsentr AN SSSR (Computing Center of

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the AS USSR) read papers on the result of their research into methods of compiling an optimum plan for RR traffic, empty movements and automobile traffic. The lecture of A. Tret'yakova, from the Institut elektronnykh upravlyayushchikh mashin AN SSSR (Institute of Electronic Control Machines of the AS USSR), dealt with the great possibilities of linear programming. I. Birman, from NII ekonomiki stroitel'stva (Scientific Research Institute of the Economics of Construction), examined a method of transporting interchangeable products. A. Faynzil'ber proposed an original method of keeping transportation costs to the minimum by selecting the most advantageous locations for housing areas, public transport stops, shops, etc. I. Bruk, Corresponding Member of the AS USSR, gave a detailed analysis of the possibilities of using electronic computers in widely differing branches of industry. N. Kobrinskiy, from the Vychislitel'nyy tsentr Gosbanka SSSR (Computing Center of the State Bank of the USSR), N. Lebedeva and Yu. Shibayev submitted a paper containing a project for a centralized computing system to be installed in the Soviet State Bank, including a large electronic computer. Other personalities mentioned as having attended the conference are: A. N. Nesmeyanov, President of the AS USSR; A. A. Dorodnitsyn, A. N. Kolmogorov, and S. L. Sobolev, all three members of the AS USSR; T. S. Khachaturov, Corresponding Member of the AS

USSR. Other organizations mentioned in the article are: Gor'kovskiy institut inzhenerov vodnogo transporta (Gor'kiy Institute of Water Transportation Engineers); the Gosplan SSSR (Gosplan USSR); Nauchno-issledovatel'skiy ekonomicheskiy institut Gosplana SSSR (Scientific Research Institute of Economics at the Gosplan USSR); the TsSU SSSR (TsSU USSR). The conference outlined the measures taken to introduce the most recent mathematical methods into economic research and planning in the USSR, and recommended the establishment of a coordinating center for all theoretical and practical work in this field. The first step in this direction should be the organization at the AS USSR of an interdepartmental scientific council to deal with questions of the application of mathematics in economics. The conference accepted the program of coordination in this field proposed in the lecture of V. Belkin. The AS USSR is recommended to organize and equip a special laboratory, and later an institute for solving the problems of economico-mathematical methodology. It is also recommended to organize an extensive scientific information service in this field; and to devote more time to mathematics and specialized economico -mathematical courses in higher economic schools. There is 1 Soviet reference.

Card 5/5

CHERNYAK, Yu.

Using mathematical methods in economic studies. Vop. ekon. no. 3:156-157 Mr '61. (MIRA 14:3)
(Economics, Mathematical)

CHERNYAK, Yu.

Economic data processing in the service of planning. Vop. ekon. no.11:124-132 N '61. (MIRA 14:11)
(Information storage and retrieval systems--Planning)
(Russia--Economic policy)

GETALO, N.; CHERNYAK, Z.; PETRENKO, M.

There should be a higher standard for the economic work in Agricultural Bank branches. Fin.SSSR 17 no.6:60-64 Je '56. (MLRA 9:9)
(Agricultural credit)

MELYUKOV, A. N., RYZHENKOV, L. I. and CHERNYAK, Z. V.

"Ultra-violet irradiation of animals and poultry in industrial conditions."

Veterinariya, Vol. 37, No. 2, 1960, p. 67

MELYUKOV, A. N., VRIZH, RYZHENKOV, L. I., Glavnyy veterinarnyy vrach
CHERNYAK, Z. V., Glavnyy zootekhnik Lyuberetskogo rayona, Moskovskoy oblasti

KAMNEV, Viktor Nikolayevich; LYAUEF, S.G., nauchn. red.;
CHERNYAK-BYKHOVSKAYA, S.A., red.

[Laboratory work on relay protection and automatic control] Laboratornye raboty po releinoi zashchite i avtomatike. Moskva, "Vysshaia shkola," 1964. 101 p. (MIRA 17:4)

BAREGAMYAN, V.A.; TRET'YAKOV, O.A.; CHERNYAKOV, E.I.; SHESTOPALOV, V.P.

Radiation from an electron beam moving parallel to a metal grating placed on the boundary of a uniaxial crystal of finite thickness. Izv. AN Arm. SSR, Ser. fiz.-mat.nauk 18 no.5:90-96 '65. (MIRA 18:12)

1. Yerevanskiy gosudarstvennyy universitet i Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki i vychislitel'noy tekhniki.

AKINIDZE, A.Z.; VYGODNER, M.A.; CHERNYAKHOVA, V.B.

Practice in geological correlation and division of Paleozoic limestones under geosynclinal conditions. Izv. vys. ucheb. zav.; geol. i razv. 6 no.12:56-61 D '63 (MIRA 18:4)

1. Kabardino-Balkarskaya kompleksnaya geologicheskaya ekspeditsiya.

BABICH, A.F. (Zaporozh'ye); CHERNYAKOV, G.A. (Zaporozh'ye)

Expediency of mass bacteriological examinations in dysentery.
Vrach. delo no.10:131-132 O '63. (MIRA 17:2)

CHERNYAKHOV, V.B.

Distribution of principal trace elements in soils in the vicinity of Nal'chik. Uch.zap.Kab.-Balk.gos.un. no.8:87-90 '60.
(MIRA 15:4)
(Nal'chik region--Minerals in soil) (Trace elements)

CHERNYAKHOVER, S.I.

YUR'YEV, YU.K.; BAZAN, V.I.; YESAFOVA, A.N.; SELIVERSTOVA, S. M. AND CHERNYAKHOVER, S.I.

"The Catalytic Transformations of Heterocyclical Compounds" Part XVI. "Synthesis of Certain Pyridine and Quinoline Derivatives of Purrolidine" Zhur Obshch. Khim. 10, No. 21, 1940. Moscow Order to Lenin State University imeni M.V. Lomonosova, Laboratory of Organic Chemistry imeni Academician N. D. Zelinskiy. Received 26 May 1940

U-1612, 3 Jan. 1952.

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620001-1

Method for [illegible]
L. A. Gintse, [illegible]
Khim. 6, 13[illegible]
[illegible]
[illegible] from [illegible]
for 1.5-24 [illegible]
2 parts, one [illegible]
content decre[illegible]
from 45 to 32 [illegible]
[illegible] and less [illegible]
larly the part [illegible]
stroyed the tox[illegible]
antigen. [illegible]
lower the tox[illegible]
decrease in the [illegible]
phosphate decr[illegible] [illegible] phos[illegible]

greatly lowered [illegible]
tained at the same [illegible] M. [illegible]

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620001-1"

CHERNYAKHOVER, S.I.

Distribution of labeled antigens in the animal organism. V. I. Ivanov, M. M. Priselkov, S. I. Chernyakhover, and S. V. Lesnyak. *Zhur. Microbiol., Epidemiol. i Immunobiol.* 1954, No. 11, 71-5.—Antigens of typhus bacteria labeled with P^{32} were prepd. by growing the bacteria on medium contg. radio-P, extn. of the antigen from the cells by trichloroacetic acid, dialysis to remove free radiophosphate, and pptn. of the labeled antigens with EtOH. Antigens were injected intraperitoneally, subcutaneously, or orally into white mice. Animals were sacrified at intervals following injection of the labeled antigen extending to 8 days, and various organs and blood were assayed for P^{32}. Intraperitoneally injected antigen accumulates principally in the liver (about 30% in the first day), with much lower amts. in other organs. None was found in the brain. On subcutaneous injection the distribution of P^{32} was similar, but in much lower concns. in all organs. Only 1–1.5% of total P^{32} administered orally was found in all organs combined. When radiophosphate was injected intraperitoneally, its distribution in various organs was different from that observed with antigen-P^{32} administered in the same manner.

J. A. Stekol

IVANOV, V.I.; CHERNYAKHOVER, S.I.

Effect of hexose phosphates on the growth and certain metabolic reactions in dysentery bacteria and Escherichia coli. Biokhimiia 24 no.6:1020-1022 N-D '59. (MIRA 13:5)

1. Biochemical Laboratory, the State Control Institute of Medical Biological Preparations, Moscow.
(HEXOSES pharmacol.)
(SHIGELLA pharmacol.)
(ESCHERICHIA COLI pharmacol.)

CHERNYAKHOVICH, V.A., inzh.

Theory of marine machanisms. Trudy NIIVTa no.12:172-178 '62.
(MIRA 16:3)

1. Nikolayevskiy korablestroitel'nyy institut.
(Marine engineering)

CHERNYAKHOVSKAYA, I.V.

Comparative characteristics of some chemical methods of concentrating bacteriophage. Vop.virus 7 no.5:607-612 S-O '62.
(MIRA 15:11)

1. Institut epidemiologii i mikrobiologii imeni N.F.Gamalei AMN SSSR, Moskva.
(BACTERIOPHAGE)

CHERNYAKHOVSKAYA, L.B., assistent; VASIL'YEVA, L.S., studentka

Proof of the theorem on the addition of two parallel forces distinctive from the generally accepted proof. Sbor.dokl. Stud.nauch.ob-va Fak.mekh.sel'.Kuib.sel'khoz.inst.no. 1:33-35 '62. (MIRA 17:5)

1. Kuybyshevskiy sel'skokhozyaystvennyy institut.

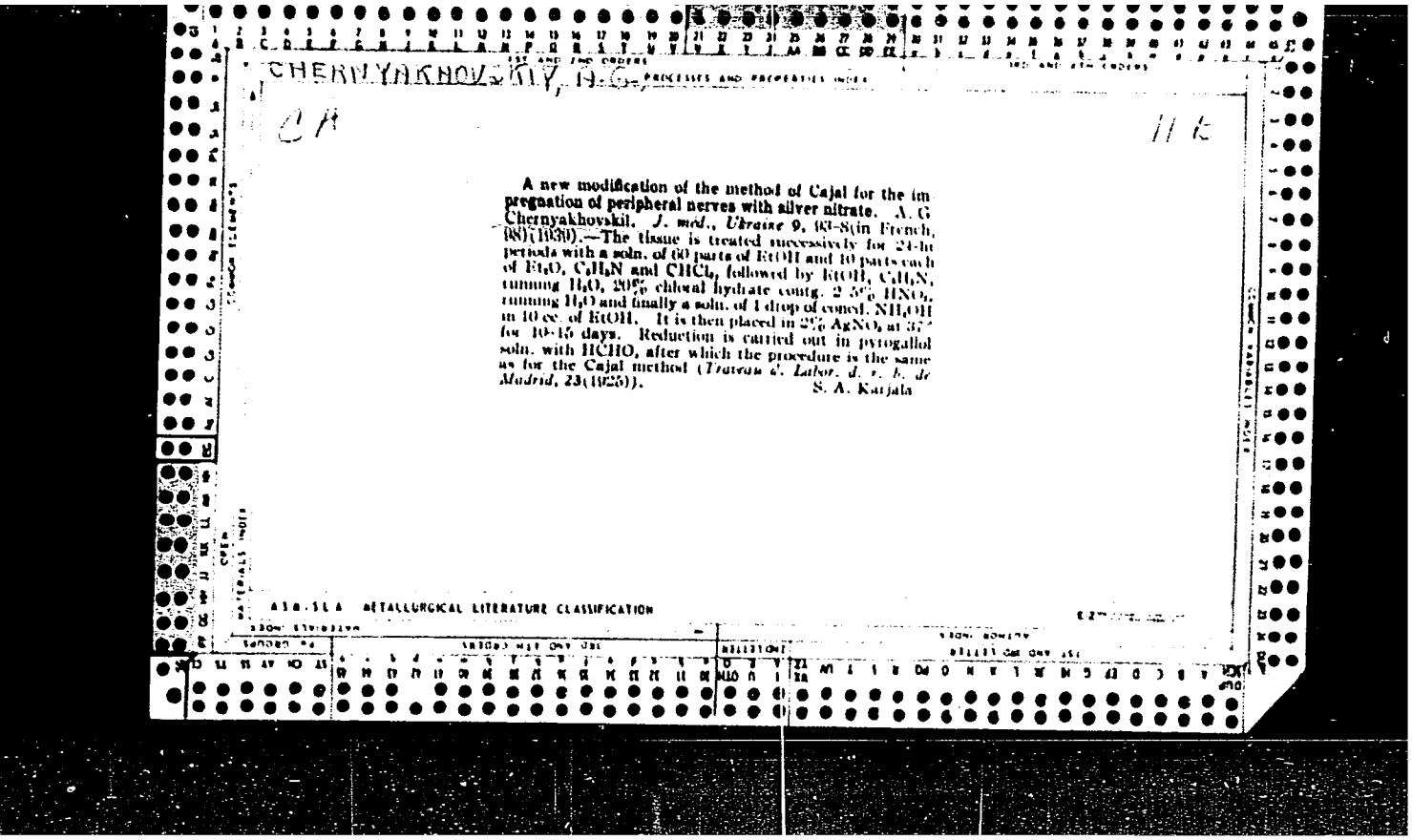
CHERNYAKHOVSKAYA, Neonila Ivanovna; AKIMUSHKIN, A.T., otv. red.
POLTAVSKAYA, S.V., red.

[Industrial development and the condition of the working class in Afghanistan] Razvitie promyshlennosti i polozhenie rabochego klassa Afganistana. Moskva, Nauka, 1965. 168 p. (MIRA 18:11)

CHERNYAKHOVSKIY, R.

BOGOLEPOVA, Lyudmila Sergeyevna, prof.; CHERNYAKHOVSKIY, A., red.; KRAKINOVSKAYA, Ye., kand.med.nauk, red.

[Development of health education in the U.S.S.R.; a lecture] Razvitie sanitarnogo prosveshcheniia v SSSR; lektsiia. Moskva, TSentr. nauchno-issl. in-t sanitarnogo prosv. M-va zdravookhraneniia SSSR, 1957. 12 p. (MIRA 11:4)
(HEALTH EDUCATION)



CHERNYAKHOVSKIY, N. G.

A new modification of the method of Cajal for the impregnation of peripheral nerves with silver nitrate. A. G. Chernyakhovskii. *J. méd., Ukraine* 9, 93–8 (in French, 98) (1930).—The tissue is treated successively for 24-hr periods with a soln. of 60 parts of EtOH and 10 parts each of Et_2O, C_5H_5N and $CHCl_3$, followed by EtOH, C_5H_5N, running H_2O, 20% chloral hydrate contg. 2.5% HNO_3, running H_2O and finally a soln. of 1 drop of concd. NH_4OH in 10 cc. of EtOH. It is then placed in 2% $AgNO_3$ at 37° for 10–15 days. Reduction is carried out in pyrogallol soln. with HCHO, after which the procedure is the same as for the Cajal method (*Trabajos d. Labor. d. r. h. de Madrid*, 23 (1925)).

S. A. Kaijala

CHERNYAKHOVSKIY, A.G.

Division of Pliocene-Quaternary sediments in the Kara-Tau.
Biul.Kom.chetv.per. no.27:98-106 '62. (MIRA 16:4)
(Kara-Tau--Geology, Stratigraphic)

CHERNYAKHOVSKIY, A.G.

Lower Mesozoic weathering surfaces in the Orsk Depression (Southern Urals). Trudy GIN no.77:35-61 '63. (MIRA 16:6)

(Ural Mountains—Weathering)

RAZUMOVA, V.N.; CHERNYAKHOVSKIY, A.G.

Ancient weathering surface of the Or'-Ilek interfluve and the history of its development. Trudy GIN no.77:81-102 '63.
(MIRA 16:6)

(Or' Valley—Weathering)
(Ilek Valley—Weathering)

CHERNYAKHOVSKIY, A.G.

Continental Cretaceous and Tertiary sediments in the southern extremity of the Southern Urals and the products of their weathering. Trudy GIN no.77:103-138 '63. (MIRA 16:6)

(Ural Mountains--Geology, Stratigraphic)

CHERNYAKHOVSKIY, A.G.

A possible source of loess material in Central Asia. Biul. Kom.chetv.per. no. 28:65-75 '63. (MIRA 17:5)

YANKELEVICH, Ye.I., FLEROVSKIY, Ye.A., CHERNYAKHOVSKIY, A.L.; BREYNINA, R.M., red.

[Callisthenics for mental workers] Gigienicheskaia gimnastika dlia rabotnikov umstvennogo truda. Moskva, 1956. 60 p. illus. (MIRA 11:11)

1. Moscow. TSentralnyy institut sanitarnogo prosveshcheniya.
(CALLISTHENICS)

CHERNYAKHOVSKIY, Feodosiy Ivanovich

[Sons of the fatherland; accounts of prominent men of the North] Syny otchizny; ocherki o vydaiushchikhsia severianakh. Arkhangel'sk, Arkhangel'skoe knizhnoe izd-vo., 1959. 201 p.
(Arctic regions) (MIRA 13:8)

CHERNYAKHOVSKIY, F.R., klinicheskiy ordinator

Peculiarities in the clinical course of stomach cancer in the young. Sbor. trud. Kursk. gos. med. inst. no.13:95-97 '58. (MIRA 14:3)

1. Iz kliniki fakul'tetskoy khirurgii (zav. - prof. M.G.Ruditskiy) Kurskogo gosudarstvennogo meditsinskogo instituta.
(STOMACH--CANCER)

CHERNYAKHOVSKIY, F.R., klinicheskiy ordinator

Rare case of osseous cyst. Sbor. trud. Kursk. gos. med. inst. no.13:439-440 '58. (MIRA 14:3)

1. Iz kliniki fakul'tetskoy khirurgii (zav. - prof. M.G.Ruditskiy) Kurskogo gosudarstvennogo meditsinskogo instituta.
(BONES--DISEASES) (CYSTS)

IVANOV, S.S., dotsent; KHRISANOPULO, M.P.; CHERNYAKHOVSKIY, F.R.

Organization of the anesthesiological service in the Orlov Province hospital. Zdrav. Ros. Feder. 4 no. 10:32-34 O '60. (MIRA 13:10)

1. Iz Orlovskoy oblastnoy bol'nitsy (glavnyy vrach M.P. Khrisanopulo).
(ORLOV PROVINCE--ANESTHESIOLOGY)

CHERNYAKHOVSKIY, F.R.

Intubation anesthesia with relaxants in emergency operations in patients in terminal states. Khirurgiia no.12:102-103 '61.
(MIRA 15:11)

1. Iz anesteziologicheskogo otdeleniya (zav. - F.R. Chernyakhovskiy) Orlovskoy oblastnoy bol'nitsy (glavnyy vrach M.P. Khrisanopulo).

(INTRATRACHEAL ANESTHESIA) (SHOCK)
(SURGERY) (MUSCLE RELAXANTS)

CHERNYAKHOVSKIY, F.R.

Characteristics of intubation anesthesia in children. Vest.khir. 89 no.8:57-60 Ag '62. (MIRA 15:10)

1. Iz Orlovskoy oblastnoy bol'nitsy (gl. vrach M.P.Khrisanopulo).
(INTRATRACHEAL ANESTHESIA)
(PEDIATRIC ANESTHESIA)

CHERNYAKHOVSKIY, F.R.; KAYEM, R.I.

Changes in the respiratory tract in patients with burns following inhalation anesthesia. Eksper. khir. i anest. 9 no.2:75-77 Mr-Ap '64. (MIRA 17:11)

1. Laboratoriya anesteziologii (zav. - doktor med. nauk T.M. Darbinyan) i otdel patomorfologii (zav. - doktor med. nauk D.S. Sarkisov) Instituta khirurgii imeni Vishnevskogo (dir. - deystvitel'nyy chlen AMN SSSR prof. Vishnevskiy) AMN SSSR, Moskva.

CHERNYAKHOVSKIY, F.R.

Minutes of the 3rd Conference of the Anesthesiological Society of Moscow and Moscow Province held on September 18, 1963. Eksper. khir. i anest. 9 no.3:93-95 My-Je '64. (MIRA 18:3)

DARBINYAN, T.M.; CHERNYAKHOVSKIY, F.R.; CHERKTAR', G.I.

Automatic regulation of adequate gas exchange in controlled respiration. Eksper. khir. i anest. 9 no.4:68-73 Jl-Ag '64 (MIRA 18:3)

1. Institut khirurgii imeni A.V. Vishnevskogo (dir. - deyst-vitel'nyy chlen AMN SSSR prof. A.A. Vishnevskiy) AMN SSSR, Moskva.

DARBINYAN, T.M.; CHERNYAKHOVSKIY, F.R.

Exact chloroform dosage in anesthesia of burn patients by means of an evaporator produced by the All-Union Scientific Research Institute of Medical Instruments and Equipment. Nov. med. tekh. no.3:61-64 '65. (MIRA 19:1)

CHERNYAKHOVSKIY, F.R.

IK-1 apparatus for the induction of coughing for the prevention and therapy of postoperative pulmonary atelectasis. Nov. med. tekh. no.3:91-93 '65. (MIRA 19:1)

DARBINYAN, T.M.; SARKISOV, D.S.; CHERNYAKHOVSKIY, F.R.

Changes in the lungs following endotracheal anesthesia with artificial ventilation in an experiment. Eksper. khir. i anest. 9 no.6:50-59 N-D '64. (MIRA 18:7)

1. Institut khirurgii imeni A.V.Vishnevskogo (direktor - deystvitel'nyy chlen AMN SSSR prof. A.A.Vishnevskiy) AMN SSSR, Moskva.

DARBINYAN, Tigran Moiseyevich; CHERNYAKHOVSKIY, Feliks Ruvimovich; YEFUNI, S.N., red.

[Anesthesia in burned patients] Narkoz u obozhzhennykh. Moskva, Meditsina, 1965. 142 p. (MIRA 18:1)

CHERNYAKHOVSKIY, Ivan Grigor'yevich; DROKHANOVA, Ye.N., red.; POPOV, N.D., tekhn. red.

[Notes of a shop foreman]Zapiski nachal'nika tsekha. Moskva, Izd-vo "Sovetskaia Rossiia," 1962. 129 p. (MIRA 15:9)

1. Nachal'nik liteynogo tsekha Vladimirskogo elektromotornogo zavoda (for Chernyakhovskiy).
(Founding)

CHERNYAKHOVSKIY, R.A.; RUBTSOV, G.S.

Construction of a factory for the manufacture of anode material used in an aluminum plant. Prom. stroi. 40 no.8:4-6 Ag '63. (MIRA 16:8)

(Volgograd--Aluminum plants)
(Electrolysis--Equipment and supplies)

ROYAK, S.M., prof.; MYSHLYAYEVA, V.V., kand. tekhn. nauk; CHERNYAKHOVSKIY, V.A., inzh.

Study of the properties of cement with an increased magnesium oxide content after prolonged hardening. Trudy NIITSement no.19:30-51 '63. (MIRA 17:11)

ROYAK, S.M., prof.; MYSHLYAYEVA, V.V., kand. tekhn. nauk; CHERNYAKHOVSKIY, V.A., inzh.

Structure of periclase in cement clinkers. Trudy NIITSement no.18: 29-49 '63. (MIRA 18:9)

YEFIMOV, Viktor Alekseyevich; OSIPOV, Vladimir Prokof'yevich; GREBENYUK, Vladimir Pavlovich; CHERNYAKHOVSKIY, Yu.A., red.izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Ways to improve the pouring of steel] Puti usovershenstvovaniia razlivki stali. Moskva, Metallurgizdat, 1963. 183 p. (MIRA 17:3)

5(3) SOV/64-59-5-22/28

AUTHORS: Vakhtel', M. I., Chernyakina, A. F.

TITLE: Determination of Pyridine Concentration in Tricresol and of Aniline Concentration in Phenols by Means of High-frequency Titration

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 5, pp 446 - 447 (USSR)

ABSTRACT: The determination of pyridine concentration in tricresol and of aniline concentration in phenols was carried out by means of an arrangement devised by V. A. Zarinskiy and D. I. Koshkin (Ref 3). The method, used nowadays, to determine the pyridine in tricresol is based on the formation of pyridine sulphate and takes about two hours. The method described is also based on the titration of pyridine with sulphuric acid (0.5 n), but here, the end of the titration is determined after the bend of the titration line, plotted in a diagram with the coordinates "used amount of acid - amount of milliamperes" (read from a microammeter). The results of measurement, obtained for pyridine concentration in different tricresol samples by means of a chemical method are compared to results, obtained by the method described and good agreement is found. The method described is

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utilized in plant "Karbolit" (town Orekhovo-Zuyevo) and permits the determination of pyridine in phenol materials within 30 minutes. Like the pyridine determination also aniline determinations in phenols may be carried out by means of the above described method, if one takes into account that the aniline concentration of the weighed sample is not more than 0.1 g. Pyridine and aniline cannot be determined at the same time, because their lines of titration are similar. There are 1 figure, 1 table, and 3 Soviet references.

15 (8), 28 (5)

S/032/60/026/01/007/052
B010/B123

AUTHORS: Tsipes, L. Ya., Chernyakina, A. F., Sakhnovskiy, Z. L.

TITLE: Answers to the Inquiry About the Test Methods of the Physical and Mechanical Properties of Plastics

V

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol 26, Nr 1, pp 20 - 22 (USSR)

ABSTRACT: Determinations of toughness, limits at static bending, compression and tensile tests, of water sorption, resistance to oil and benzene, of the specific weight of molded articles, of resistance to heat according to Schramm, of resistance to fire and cold, of hardness on the device according to Kanavets and of thermostability according to Martens should be applied more often and standardized. The characteristics mentioned above can be determined by an apparatus of the type Sharpi, a universal testing machine with constant regulation of the idling speed of the moving plate and an apparatus for measuring elongation and deflection; by the Schramm apparatus; by the apparatus according to Kanavets for determining hard-

Card 1/3

ness and by the Martens thermostat with measuring ranges up to +700° and automatic recording of sample deformation and temperature. The dynstat apparatus cannot be recommended for a wide use of endurance tests of plastics. New test methods have to be worked out for a number of characteristics. The preparation conditions of the samples have to be adapted to the processing conditions of the material. Considering the influence of the scale factor, the sample cross-section should be decreased from 15 ± 0.2x10 ± 0.2 to 10 ± 0.5x6 ± 0.2 mm. The problem of applying the measuring values of mechanical tests to the calculation of finished products is also very important. Determining the specific toughness of plastics, such as polyamides, vinyplast and others, is not advisable as these materials bend during a test without breaking, whereas the specific toughness of layer and glassy plastics characterizes the resistance of the material to dynamic load, and is usually determined in the present paper according to GOST 4647-55. As mentioned above, the test method according to Martens should be modernized by increasing the test temperature. The idling

KUVSHINSKIY, Ye.V.; BESSONOV, M.I.; ZAKHAROV, S.K.; SIDOROVICH, A.V.; GUBENKO, A.B.; PANFEROV, K.V.; GUL', V.Ye.; LOMAKIN, V.A.; TSIPES, L.Ya.; CHERNYAKINA, A.F.; SAKHNOVSKIY, Z.L.; SHCHERBAK, P.N.; AL'SHITS, I. Ya.

Answers to the inquiry concerning the determination of the physical and mechanical properties of plastics. Zav.lab. 26 no.1:7-28 '60. (MIRA 13:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR. (for Kuvshinskiy Bessonov, Zakharov, and Sidorovich). 2. TSentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy (for Gubenko and Panferov). 3. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova (for Gul'). 4. Moskovskiy gosudarstvennyy universitet imeni M.V. Lononosova. Problemnaya laboratoriya fiziko-mekhanicheskich svoystv polimerov (for Lomakin). 5. Zavod "Karbolit" (for TSipes, Chernyakina and and Sakhnovskiy). 6. Gosudarstvennyy nauchno-issledovatel'skiy institut polimerizatsionnykh plastmass (for Shcherbak). 7. TSentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya (for Al'shits)

(Plastics--Testing)

VAKHTEL', M.I.; CHERNYAKINA, M.I.

Quantitative determination of urotropine and furfural by means of high-frequency titration. Plast.massy no.2:65-67 '61. (MIRA 14:2)

(Hexamethylenetetramine) (Furaldehyde)

L 05890-67 FDN

ACC NR: AR6028226 SOURCE CODE: UR/0273/66/000/005/0005/0005

2 8
B

AUTHOR: Chernyakov, A. A.

TITLE: Effect of scavenging on the characteristics of the four-stroke engine generator

SOURCE: Ref. zh. Dvigateli vnutrennego sgoraniya, Abs. 5. 39.19

REF SOURCE: Tr. Khar'kovsk. in-ta inzh. zh.-d. transp. vyp. 77, 1965, 52-60

TOPIC TAGS: diesel engine, engine lubrication system, engine blowing

ABSTRACT: A method of calculating the effect of blowing through on the operational characteristics of an engine is proposed. The method is based on results of tests conducted on a D-70 diesel engine at the KhPI im. V. I. Lenin.

SUB CODE: 21/

KH

Card 1/1

8(2) SOV/119-59-7-16/18

AUTHOR: Chernyakov, A. I.

TITLE: A Signalizer of the Level of Liquid and Loose Media

PERIODICAL: Priborostroyeniye, 1959, Nr 7, pp 29-30 (USSR)

ABSTRACT: In the introduction, the possibilities of using the ESU-1 level-signalizer are discussed. The signalizer consists of an electronic block and a capacitive scanner. The electronic block is located in an aluminum case, and the scanner is connected with the electronic block by means of a coaxial cable. The wiring scheme shown by figure 3 is briefly discussed. By capacity variations at the electrodes of the scanner, caused by level variations of the material within the range of from 2 to 5 pf, a stripping of the grid resistance developed as a high-frequency oscillation circuit of the 6N8S tube is caused, and in this way the anodic current is controlled. The latter operates a relay. Finally, several building-in examples are discussed. There are 4 figures.

Card 1/1

S/119/61/000/008/006/008
D215/D302

AUTHOR: Chernyakov, A.I.

TITLE: Electronic liquid and dry substances level indicator type ЭИУ (EIU)-1

PERIODICAL: Priborostroyeniye, no. 8, 1961, 24 - 26

TEXT: This article describes the application, construction and performance of the level indicator type EIU-1. This continuous remote indicator is manufactured by the sovnarkhoz plant of the Kirgiz SSR. The controlled substances can be water, acid and base solutions, petroleum products, mineral and vegetable oils, syrups, flour, powder, starch, grain, sugar, soda lime, sand, gravel etc. It consists of 3 parts: an electronic unit built into a splash and dustproof cabinet, a remote indicator and a capacitance sensing head protected with an insulating cover. The electrodes of the sensing head can be either insulated or bare according to the nature of controlled substance. The type of insulating cover depends on

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S/119/61/000/008/006/008
D215/D302

Electronic liquid and dry ...

chemical and physical properties of the substance. The head is connected to the electronic unit by a screened coaxial cable 2.5 to 5 m long. The instrument has 3 ranges of sensitivity. This permits a plant calibration of the instrument according to application. The initial capacity consists of the capacity of the coaxial cable and non-submerged part of the measuring head. The final capacity is determined by the dielectric constant and the length of the submerged part of the head. The instrument utilizes the A.C. capacitance bridge principle. One arm consists of the sensing head and the other arm is used to balance the bridge. The other two arms of the bridge are inductively coupled with a h.f. oscillator. The basic circuit diagram of the apparatus is given. The mains voltage stability is obtained by the ferrous resonance method. The h.f. oscillator utilizing a double triode 6N1P energizes the bridge. The indicator circuit is connected across the bridge. The accuracy of the instrument is determined by the surface quality of the insulating cover of the measuring head, hygroscopic properties of the controlled substance, viscosity, skin formation, crystalliza-

Card 2/3

S/119/61/000/008/006/008
D215/D302

Electronic liquid and dry ...

tion and change of dielectric constant of substance with temperature. The error of measurement is 2.5 % f.s. Power consumption 45 W. Mains supply 220 V a.c. and 50 cycles. Operating pressure up to 30 atm. Temperature of substance -20° to 60°C (-100° to + +200°C to special order). There are 5 figures.

Card 3/3

CHERNYAKOV, A.I.

The EIU-1 electronic level indicator for liquid and loose media. Priborostroenie no.8:24-26 Ag '61. (MIRA 14:8)
(Level indicators)

BRYNZA, N.F.; STERLIN, B.P.; TKHORZHEVSKIY, S.A.; CHERNYAKOV, A.M.

Some characteristics of the relation of Upper Paleozoic and Mesozoic structural plans in the West Ukrainian oil- and gas-bearing basin. Geol. nefti i gaza 9 no.6:22-27 Je '65. (MIRA 18:8)

1. Trest Khar'kovneftegazrazvedka i Ukrainskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta prirodnogo gaza.

VOLKOV, Pavel Pavlovich; DANILOV, Grigoriy Nikolayevich; CHERNYAKOV, Irma Isaakovich; VRUBLEVSKIY, A.V., inzh.-podpolkovnik, red.; MEDNIKOVA, A.N., tekhn. red.

[Problem manual on electrical engineering] Zadachnik po elektrotekhnike. Izd.2., perer. Moskva, Voen. izd-vo M-va obor. SSSR, 1961. 309 p. (MIRA 14:10)

(Electric engineering--Problems, exercises, etc.)

CHERNYAKOV, A.I.

The ESU-2 two-range electronic level indicator. Priborostroenie no.9:28 S '63. (MIRA 16:9)

(Level indicators)

CHERNYAKOV, A.T.

Determining the electrical resistivity of beds of small and medium thickness from standard electric-logging diagrams. Geofiz. razv. no. 15:152-156 '64. (MIRA 17:7)

CHERNYAKOV, E.I.

Radiation from a beam moving above a diffraction grating on a shielded dielectric. Izv.vys.uchseb.zav.; radiofiz. 8 no.1:193-195 '65. (MIRA 18:6)

1. Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki i vychislitel'noy tekhniki.

YUDOVICH, V.G.; KHLEBORODOV, A.D.; SOLONEVICH, Ye.A.; VEYTS, V.L.; PANOV, F.S.; BELYAYEV, A.N.; ALAD'IN, O.I.; OSTROV, V.F.; VOROB'YEV, A.I.; PROKOF'YEV, Yu.V.; SOLOV'YEV, Yu.A.; KUZ'MIN, A.V.; ZHIDONIS, V.Yu.; ZOLIN, A.V.; ZATSEV, Ye.I.; DOBROSLAVSKIY, V.L.; TROFIMOV, Ye.N.; DRYAGIN, Ye.R.; KOROLEV, V.F.; KERIMOV, N.B.; KRAVCHENKO, A.S.; RYVLIN, V.A.; GURCHENKO, A.P.; KRUGLIKOV, T.F.; CHERNYAKOV, F.A.; ARKHIPOV, N.K.

Authors' certificates and patents. Mashinostroenie no.1:101-103 Ja-F '65. (MIRA 18:4)

L 41756-66 EWT(1) GG

ACC NR: AP6011919 SOURCE CODE: UR/0141/66/009/002/0341/0350

AUTHOR: Tret'yakov, O. A.; Chernyakov, E. I.; Shestopalov, V. P.

ORG: Khar'kov Institute of Mining-Machine Construction, Automatics, and Computer Engineering (Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki i vychislitel'noy tekhniki)

59
B

TITLE: Theory of the Smith-Purcell effect

SOURCE: IVUZ. Radiofizika, v. 9, no. 2, 1966, 341-350

TOPIC TAGS: electromagnetic wave, electromagnetic wave generation, diffraction grating, electromagnetic radiation, reflector diffraction grating, electron beam

ABSTRACT: Previous authors' works (e.g., Zh.T.F., v. 36, 34, 1966) established a strong dependence of the intensity of electromagnetic-wave radiation on the width of metal strips that form the grating. The present article investigates the electromagnetic-wave radiation by a modulated electron beam traveling over a reflecting diffraction grating. The radiation energy characteristics of this grating are compared to those of a strip-type grating and a grating formed by rectangular-cross-

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L 41756-66

ACC NR: AP6011919 O

section bars. The effect of the grating profile on radiation is analyzed. Optimal parameters of the beam and the grating are determined for the case when the effects of the space charge and reaction (influence of radiation on the beam) are neglected. It is found that: (1) With a specified current, the electron beam must be as thin as possible and must be kept as close to the grating as possible; (2) The diffraction-grating profile has an important bearing on the radiated power and the directional pattern; (3) The radiation caused by a nonmodulated electron beam is noncoherent; the degree of coherence can be controlled by modulation. Orig. art. has: 6 figures and 36 formulas.

SUB CODE: 20, 09 / SUBM DATE: 30Jun65 / ORIG REF: 008 / OTH REF: 004

Card 2/2

26468

27.1150

S/177/60/011/002/003
D219/D302

AUTHOR: Chernyakov, I.N. Major of Medical Services, Candidate of Medical Sciences

TITLE: The effect on the blood circulation speed of breathing rarified air and oxygen at increased pressure at high altitudes

PERIODICAL: Voyenno-meditsinskiy zhurnal, no. 11, 1960, 68 - 70

TEXT: The purpose of the report was to fill a gap in literature. 28 experiments were performed with 8 healthy men, 20 - 22 years old, at altitudes of 3,000, 5,000 and 7,000 meters. The circulation speed, respiration and heart rates, blood oxygen saturation and arterial pressure were measured. The initial circulation rate of subjects varied from 5 - 7 secs; the slower the pulse, the faster the blood speed. The specific nature of any changes varied with height and length of exposure to a particular atmosphere, but there was a general tendency for the circulation speed to increase with altitude, the greatest increase

Card 1/3

The effect on the blood...

at 5,000 m., being accompanied by increased heart rate and lowered oxygen saturation. Physical work (15 squats a minute) had the same effect although in one experiment the circulation speed fell, while the heart rate rose to 102 a minute (normal:66) showing that intense muscular activity may overload the cardio-vascular system by aggravating oxygen hunger. Analogous results were obtained at 7,000 m: the blood oxygen saturation fell to 71 - 72%, circulation rate reached 3.6 secs, in the first 2 -3 mins. but then slowed down. This slowing in states of gross oxygen deficiency results from weakening of the heart and loss of vessel tonus especially in the peripheral circulation. As regards the effect of inspiration under pressure, the author opened the discussion by general references to the work of A. G. Kuznetsov, G. V. Altukhov, P. N. Ivanov, D. I. Ivanov, G. G. Sturua, and V. C. Gurfinkel'. He then reported that in his own experiments, using labelled KKO-3, he found that in 10 cases out of 22, circulation speed increased slightly, in 7 was un-

changed and in 5 slowed down (to 7.5 - 11 secs.). Moreover, slowing occurred usually towards the end of the experiment (15 - 26 mins.) by which time the subjects' condition had deteriorated markedly with pallor, rapid pulse (108 - 126/min.) and occassionally bradycardia. The experiment was then discontinued. Return to ground level conditions caused a fall in circulation speed with restoration of initial cardiac frequency. This also occurred at 5,000 m. when breathing rarified air.

SUBMITTED: May, 1960

X

Card 3/3

279Ц4
S/177/61/000/009/002/002
D264/D303

AUTHORS: Tsivilashvili, A.S., Lieutenant Colonel, Medical Corps, and Chernyakov, I.N., Major, Medical Corps, and Candidate of Medical Sciences

TITLE: The effects of explosive decompression on animals and man

PERIODICAL: Voyenno-meditsinskiy zhurnal, no. 9, 1961, 65-69

TEXT: The authors analyze and collate the findings of western researchers on the effects of explosive decompression on man and animals. Points covered are: the boundary between slow and explosive decompression; the general and local changes due to explosive decompression (retarded respiration, bradycardia, a drop in arterial pressure, damage to the gastrointestinal tract, external traumas); individual resistance to decompression; means of protection, etc. The authors conclude that, under explosive decompression, there occurs a marked increase in the pressure and volume of body

Card 1/2

cavities containing gases and air, which may cause morphological lesions. The most marked lesions occur in the lungs, their extent depending on the physical parameters of the pressure drop, the presence of protective devices, the state of the respiratory tract and the subject's physical constitution. They also point out that research so far has somewhat neglected two aspects: reliable means of protection against explosive decompression, and the effects of decompression on men wearing various types of oxygen-breathing apparatus.

Card 2/2

CHERNYAKOV, A.M., inzh.; OGUROK, I.A., inzh.

Improving the technology of heating, bending, and drying beechen parts. Der.prom. 7 no.3:19-20 Mr '58. (MIRA 11:4)

1.L'vovskaya fabrika gnutoy mebeli.
(Ivov--Chairs)

L 4098-66 EWT(1) GW

ACC NR: AP5026464 SOURCE CODE: UR/0006/65/000/010/0022/0029

37
13

AUTHOR: Tarazevich, G. S.; Chernyakov, A. S.
44,55 44,55

ORG: none

TITLE: Preliminary analysis of triangulation on the "Ural-1" computer

SOURCE: Geodeziya i kartografiya, no. 10, 1965, 22-29

TOPIC TAGS: triangulation, computer programming
12,44,55

ABSTRACT: A program is developed and tested for preliminary analysis of triangulation on the "Ural-1" computer. The initial input data are the preliminary coordinates of all points, centering and reduction elements and measured bearings. The preliminary coordinates of the points are calculated from angles (bearings) which are not corrected to the center. The program may be used for any triangulation grid where there are no more than twenty bearings from a point (including bearings on reference points). Otherwise the bearings at the point must be divided into groups and handled as if they were separate points. The program consists of three parts. The spherical excesses of the triangles are calculated in the first part; in the

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Card 1/2

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ACC NR: AP5026464

second part of the program the numerator in the formula for reduction correction is calculated, and the various values for this numerator are distributed to the proper locations for a given group of points; the third part consists of calculation and printout of the remaining quantities necessary for triangulation analysis. The entire program is described in detail and the three parts of the main program are divided into subsections. Analysis of two triangulation grids (approximately 350 points) using the proposed program shows that an average of 20 minutes is spent in preparing the information for a single point. An average of 5-6 minutes of machine time is used in analyzing a single point. Orig. art. has: 2 figures, 6 tables.

SUB CODE: DP,ES/ SUBM DATE: 00/ ORIG. REF: 000/ OTH REF: 000

BVK
Card 2/2

SHESTOPALOV, V.P., SLYUSARSKIY, V.A., ANDRENKO, S.D., CHERNYAKOV, E.I.

Electromagnetic waves in a spiral wave guide with an anisotropic dielectric. Zhur. tekhn. fiz. 30 no.6:644-652 Je '60. (MIRA 13:8)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M.Gor'kogo.
(Electromagnetic waves)
(Wave guides)

L 21720-65 EWT(1) IJP(c) GG/AT
ACC NR: AP6004875 SOURCE CODE: UR/0057/66/036/001/0033/0038

51
B

AUTHOR: Trot'yakov, O.A.; Chernyakov, E.I.; Shestopalov, V.P.

ORG: Khar'kov Institute of Mining Machine Construction, Automation, and Computing Technology (Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki i vychislitel'noy tekhniki)

21,4455 21,4455

TITLE: Radiation of electromagnetic waves by an electron sheet moving above a diffraction grating

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 1, 1966, 33-38

TOPIC TAGS: diffraction grating, electron beam, electromagnetic radiation, electromagnetic wave diffraction

ABSTRACT: The authors discuss the radiation of an infinite plane sheet of electrons moving at constant velocity parallel to a plane diffraction grating. The grating is assumed to consist of an infinite sequence of infinitely long rods of rectangular section with their axes in the x-y plane and parallel to the x axis of a rectangular Cartesian coordinate system xyz. The dimensions of the rods are assumed to be 2(L - d) in the y-direction and 2h in the z direction, and the rods are assumed to be separated by the distance 2d, so that the grating constant is L. The electrons are assumed to move in the plane z = p with constant velocity in the y direction, and the density of the sheet is assumed to be proportion to exp[i(ky - ft)], where i is the imaginary

Card 1/2 UDC: 538.561

L 21720-66

ACC NR: AP6004875

unit, k and f are constants, and t is the time. The wave radiated by the electron sheet is diffracted by the grating. The diffracted wave is expanded in a series of partial waves and an infinite set of linear equations is derived for the expansion coefficients. These equations were solved with the aid of a computer for different values of the grating parameters, Poynting's vector was calculated for the case that only a single diffracted wave is radiated approximately normally to the grating, and the results are presented graphically. The calculations were checked by comparison with those of Z.S.Agranovich, V.A.Marchenko, and V.P.Shestopalov (ZhTF, 32, 381, 1962) for the case h = 0. It is shown that the maximum power is radiated when L/d is approximately 5, that resonant increase of the radiated power occurs when 2h is a multiple of half the wavelength, and that the radiated power increases rapidly with decreasing distance between the electron sheet and the grating. Orig. art. has: 20 formulas and 4 figures.

SUB CODE: 20/ SUBM DATE: 03Mar65/ ORIG REF: 003/ OTH REF: 003

Card 2/2

ACC NR: AR7000888 SOURCE CODE: UR/0058/66/000/009/H025/H026

AUTHOR: Chernyakov, E. I.; Tret'yakov, O. A.; Shestopalov, V. P.

TITLE: Theory of the Vavilov-Cherenkov effect for the motion of electron fluxes above a complex interface

SOURCE: Ref. zh. Fizika, Abs. 9Zh190

REF SOURCE: Radiotekhnika. Resp. mezhved. nauchno-tekhn. sb., vyp. 1, 1965, 142-148

TOPIC TAGS: electron flux, electromagnetic wave, Vavilov Cherenkov effect, vacuum dielectric boundary, electromagnetic wave radiation

ABSTRACT: The problem of electromagnetic wave radiation by a plane monochromatic electron flux moving above an infinitely long ribbon grid placed on the vacuum-dielectric interface is investigated. It is shown the infinite system of equations determining radiation field partial wave amplitudes can be reduced of a system which may be conveniently solved numerically by a computer. General conclusions are obtained on radiation field frequency, which is determined by the

Card 1/2

ACC NR: AR7000888

modulation frequency of the beam, and on the radiation direction which forms a discrete spectrum analogous to a diffraction spectrum. N. Khizhnyak. [Translation of abstract] [DW]

SUB CODE: 20/

Card 2/2

L 15275-66 EWT(1)/EWP(1) IJP(c) AT

ACC NR: AP5028293 SOURCE CODE: UR/0022/65/018/005/0090/0096

AUTHOR: Baregamyan, V. A.; Tret'yakov, O. A.; Chernyakov, E. I.; Shestopalov, V. P.

ORG: Yerevan State University (Yerevanskiy gosudarstvennyy universitet); Kharkov Institute of Mining Machine Building, Automation and Computing Technology (Khar'kovskiy institut gornogo mashinostroyeniya, avtomatika i vychislitel'noy tekhniki)

TITLE: Radiation from a stream of electrons moving parallel to a metal grid located on the edge of a uniaxial crystal of finite thickness

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 18, no. 5, 1965, 90-96

TOPIC TAGS: particle physics, electron radiation, dielectric material, electron beam

ABSTRACT: The authors give a strict solution for the problem of radiation from a beam of electrons moving above the surface of an anisotropic dielectric of finite thickness with a grating. It is assumed that a grid made up of metal bands is applied to one of the surfaces of a plane-parallel layer of anisotropic dielectric

Card 1/2

L 15275-66
ACC NR: AP5028293

material (a uniaxial crystal) with a given permeability. A formula is derived in the form of a Fourier series for the proper electromagnetic field of the electron beam. Conditions are determined under which radiation takes place in the crystal and in free space. Orig. art. has: 22 formulas.

SUB CODE: 20/ SUBM DATE: 15Feb65/ ORIG REF: 004/ OTH REF: 001

OC

Card 2/2

FAVER, G.L.; KOROLEV P.A., kandidat meditsinskikh nauk, direktor; CHERNYAKOV, G.A., ispolnyayushchiy obyazonosti glavnogo vracha.

Effect of magnesic solutions of penicillin upon the culture of staphylococcus aureus; author's abstract. Zhur.mikrobiol.epid.i immun. no.2:53 F '53. (MLRA 6:5)

1. Krymskiy institut epidemiologii i mikrobiologii (for Korolev). 2. Nizhegorskaya rayonnaya bol'nitsa (for Chernyakov). (Penicillin) (Staphylococcus)

CHERNYAKOV, G.A., mayor meditsinskoy sluzhby

Clinical epidemiological evaluation of the treatment of patients following dysentery and enterocolitis. Voen.-med. zhur. no.6:40-42 '64. (MIRA 18:5)

Chernyakov G.S.

FEDOROV, V.I., inzhener; CHERNYAKOV, G.S., inzhener.

Experience in using aerial photography in surveying highways.
Avt.dor. 19 no.12:18-20 D '56. (MIRA 10:10)
(Roads--Surveying) (Aerial photogrammetry)

CHERNYAKOV, G.S., inzh., SEMENOVSKIY, A.A., inzh.

New requirements concerning the precision of topographic and geodetic work in surveying highways. Avt. dor. 21 no. 7:12 Jl '58. (MIRA 11:8)

(Roads--Surveying)

NOSKOV, G.S.; CHERNYAKOV, G.S.

Raise road design to the level of modern problems. Avt.dor. 26 no.4:1-3 Ap '63. (MIRA 16:4)

(Roads--Design)

TSIVILASHVILI, A.S., podpolkovnik meditsinskoy sluzhby; CHERNYAKOV, I.N., mayor meditsinskoy sluzhby, kand.med.nauk

Influence of explosive decompression on the animal and human body (as revealed by foreign studies). Voen.-med.zhur. no.9:65-69 S '61. (MIRA 15:10)
(DECOMPRESSION SICKNESS) (AVIATION MEDICINE)

YEREMIN, A.V.; CHERNYAKOV, I.N.

Regulation of respiration and blood circulation in somnolent states. Fiziol.zhur. 42 no.7:541-545 Jl '56. (MLRA 9:10)

1. Kafedra fiziologii voyennogo truda Voyenno-meditsinskoy akademii imeni S.M.Kirova, Leningrad.

(REFLEX, CONDITIONED,
conditioned cerebrocortical hypnosis, eff. on pneumogram & plethysmogram (Rus))
(RESPIRATION, physiology,
eff. of conditioned cerebrocortical hypnosis on pneumogram (Rus))
(PLETHYSMOGRAPHY,
eff. of conditioned cerebrocortical hypnosis (Rus))
(HYPNOSIS, effects,
conditioned cerebrocortical hypnosis on plethyrmogram & pneumogram (Rus))

VAKAR, M.I., kand.med.nauk, podpolkovnik meditsinskoy sluzhby; AGADZHANYAN, N.A., kand.med.nauk, mayor meditsinskoy sluzhby; CHERNYAKOV, I.N., kand.med. nauk, kapitan meditsinskoy sluzhby

Changes in blood oxygen at high altitudes and their relation to the effectiveness of a space suit. Voen.med.zhur. no.5:29-32 My '59. (MIRA 12:8)

(OXYGEN, in blood,
at high altitudes, eff. of effectiveness of space suit (Rus))
(ALTITUDE, eff.
on blood oxygen, eff. of effectiveness of space suit (Rus))

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AUTHOR: Popkov, V. L. (Moscow); Chernyakov, I. N. (Moscow)

ORG: none

TITLE: Blood oxygen and CO_2 tension in dogs under excess pressure at high altitudes

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 60, no. 10, 1965, 20-23

TOPIC TAGS: hypercapnia, oxygen, dog, space chamber, space physiology, hypoxia, blood

ABSTRACT: Oxygen tension (pO_2) in the arterial and venous blood of dogs under conditions of excess intrapulmonary pressure and high altitudes was determined polarigraphically. The pCO_2 and pH of the blood were also recorded. The experiments showed that when dogs are "elevated" to an altitude of 4 km in a pressure chamber, pO_2 drops from 87 to 52.5 mm Hg in arterial blood and from 49 to 38 mm Hg in venous blood, producing a hypoxic condition. However, "elevation" to 10 km with substitution of 100% oxygen for air restores the pO_2 of arterial and venous blood almost to normal (90 and 48.4 mm Hg). "Elevation" to 20 km with excess pressure (oxygen mask) respiration giving an absolute intrapulmonary pressure of 150 mm Hg reduces arterial and venous pO_2 to levels observed with 4-km "elevation" breathing air. Increasing the intrapulmonary pressure to 200 mm Hg restores pO_2 to initial sea-level values (86.3 and 49.4 mm Hg). It was found that pCO_2 tends

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